

REMARKS

Claims 23-26, as amended, remain herein.

Claim 23 has been amended to recite that the highest luminance of the backlight portion is not greater than 5000 cd/m^2 so that the photoelectric current range of the device is thereby regulated to suppress OFF current during irradiation of the display device with light. See applicants' specification, at page 8, lines 21-25.

1. Claims 23-26 were rejected under 35 U.S.C. §103(a) over Kunii U.S. Patent 5,412,493, Tanaka et al. U.S. Patent 6,635,505, Applicants' admitted prior art ("AAPA") and/or Ohta et al. U.S. Patent 6,532,053.

The presently claimed liquid crystal display device includes a structure satisfying expression (2), i.e., $(R + 30) \cdot W < 1 \times 10^3$ where $R \text{ (k}\Omega/\square\text{)}$ is the sheet resistance of the LDD region and $W \text{ (}\mu\text{m)}$ is the channel width of the channel region, and the highest luminance of the backlight portion is not greater than 5000 cd/m^2 , so that the photoelectric current range of the device is thereby regulated to suppress OFF current during irradiation of the display device with light. This arrangement is nowhere disclosed or suggested in any of the cited references.

The Office Action cites Kunii '493 as allegedly disclosing

a liquid crystal display device having TFTs having a channel width and length of 3 microns, Tanaka '505 as allegedly teaching a TN-type liquid crystal used in a TFT display device, Ohta '053 as allegedly teaching a backlight with a brightness that can be 3000 cd/m², and the AAPA as allegedly teaching that sheet resistance of the LDD region in the range of 20 k Ω /□ to 100 k Ω /□ is known, and takes the position that applicants' claimed relationship between depletion layer width and photoconductive current allegedly is mere optimization of design.

However, none of the cited references teaches or suggests a specific relationship between sheet resistance of the drain region and channel width that results in regulation of the photoelectric current range in which OFF current is suppressed during irradiation of light, as expressed in applicants' claim 23.

Also, the cited references do not teach or suggest that a display device configured to have a photoelectric current range that is regulated to suppress OFF current during irradiation of the display device with light would be desirable or beneficial, and therefore they do not teach any relationship for providing such regulation, including applicants' relationship, between sheet resistance of the drain region and channel width, i.e., formula (2) for providing such OFF current suppression, as recited in claim 23.

For the foregoing reasons, none of Kunii '493, Tanaka '505, the AAPA and Ohta '053 contains any teaching, suggestion, reason, motivation or incentive that would have led one of ordinary skill in the art to applicants' claimed invention. Nor is there any disclosure or teaching in any of these references that would have suggested the desirability of combining any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 25 and 26, which depend from claim 23, are allowable for the same reasons explained herein for claim 23. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

All claims 23-26 are now proper in form and patentably distinguished over all grounds of rejection stated in the Office Action. Accordingly, allowance of all claims 23-26 is respectfully requested.


Serial No. 10/018,795

Should the Examiner deem that any further action by the applicants would be desirable to place this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representatives.

Respectfully submitted,

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December 17, 2004
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Attorney Docket No.: OGOH:104

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